

At the completion of the project, temporary crash cushion modules, sand filling, pallets or frames, and marker panels shall become the property of the Contractor and shall be removed from the site of the work. Temporary crash cushion modules shall not be installed in the permanent work.

Temporary crash cushion modules placed in conformance with Section 7-1.09, "Public Safety," of the Standard Specifications will not be measured nor paid for.

#### **10-1.43 QUICKCHANGE MOVEABLE BARRIER SYSTEM**

This work includes furnishing, installing, maintaining and removing the Quickchange Moveable Barrier System (QCMB), as shown on the plans and in conformance with the provisions in the Standard Specifications and these special provisions.

Attention is directed to "Order of Work" of these special provisions regarding furnishing the Engineer a statement from the vendor that the order for the Quickchange Moveable Barrier System has been received and accepted by the vendor.

Quickchange Moveable Barrier System (QCMB) shall be as manufactured by Barrier Systems, Inc. consisting of the following components:

- A. Series 200 construction barrier consisting of heavily reinforced concrete barrier sections with special steel hinge system.
- B. A transfer and transport machine (TTM) that moves the wall, with a backup machine available.
- C. An ABSORB 350, Test Level 3 crash cushion.

Arrangements have been made with the manufacturer of the QCMB to insure that any successful bidder can lease the Quickchange Moveable Concrete Barrier and transfer and transport vehicle from the above named source. A materials information handout for the QCMB including the Absorb 350 is provided. The price quotations, not including sales tax, by the manufacturer for the Quickchange Moveable Barrier System including the ABSORB 350, Test Level 3 crash cushion, F.O.B. 180 River Road, Rio Vista, California 94571, telephone (707) 374-6800 is included in the supplemental information handout.

The Quickchange Moveable Barrier System shall be installed in accordance with the manufacturer's recommendations.

The Contractor shall furnish to the Engineer one copy of the manufacturer's plan and parts list for the model installed and training certificate for the operation of the transfer and transport machine (TTM).

Provide training on the operation of the TTM for 2 Department employees.

The Contractor shall provide the Engineer with the manufacturer's Certificate of Compliance in accordance with the provisions of Section 6-1.07, "Certificates of Compliance," of the Standard Specifications. The Certificate of Compliance shall certify that the system complies with the contract plans and specifications, conforms to the prequalified design and material requirements, and was manufactured in accordance with the approved quality control program.

Each length of barrier placed within 10 feet of a traffic lane shall have a reflector installed on top of the barrier. Reflectors on QCMB shall conform to the provisions in "Approved Traffic Products" for temporary railing (Type K) of these special provisions, and adhesive shall conform to the reflector manufacturer's recommendations. A marker panel shall also be installed at each end of the barrier installed adjacent to a two-lane, two-way highway and at the end facing traffic of barrier installed adjacent to a one-way roadbed. If the barrier is placed on a skew, the marker shall be installed at the end of the skew nearest the traveled way. Type P marker panels shall conform to the provisions in Section 82, "Markers and Delineators," of the Standard Specifications except that the Contractor shall furnish the marker panels.

After initial placement of Quickchange Moveable Barrier System, the Quickchange Moveable Barrier System shall be moved from location to location, as shown on the plans.

If the Engineer orders a move of the Quickchange Moveable Barrier System and the repositioning is not shown on the plans, moving the Quickchange Moveable Barrier System will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications and the Quickchange Moveable Barrier System will not be measured in the new position. Quickchange Moveable Barrier System placed in excess of the length shown, specified, or ordered will not be paid for.

If the Engineer orders a move of the Quickchange Moveable Barrier System and the TTM Operator is not on-site, the Contractor shall respond and be on-site within 1 hour.

#### **COST BREAK-DOWN**

The Contractor shall furnish the Engineer a cost break-down for the contract lump sum item of the Quickchange Moveable Barrier System. Cost break-down table shall be submitted to the Engineer for approval within 30 working days after the contract has been approved. Cost break-down table will be approved, in writing, by the Engineer before any partial payment will be made for the applicable items of the Quickchange Moveable Barrier System involved.

Attention is directed to "Time-Related Overhead" of these special provisions regarding compensation for time-related overhead.

The cost break-down shall be completed and furnished in the format shown in the sample of the cost break-down included in this section. Line item descriptions of work shown in the samples are the minimum to be submitted. Additional line item descriptions of work may be designated by the Contractor. If the Contractor elects to designate additional line item descriptions of work, the quantity, value and amount for those line items shall be completed in the same manner as for the unit descriptions shown in the sample. The line items and quantities given in the sample are to show the manner of preparing the cost break-down to be furnished by the Contractor.

The sum of the amounts for the line items of work listed in each cost break-down table for Quickchange Moveable Barrier System work shall be equal to the contract lump sum price bid for Quickchange Moveable Barrier System. Overhead and profit, except for time-related overhead, shall be included in each individual line item of work listed in a cost break-down table.

**QUICKCHANGE MOVEABLE BARRIER SYSTEM COST BREAK-DOWN**  
Contract No. 04-163744

ITEM	ITEM DESCRIPTION	UNIT	APPROXIMATE QUANTITY	VALUE	AMOUNT
A	Series 200 Construction Barrier - Lease/Rental	LF	7000		
B	Series 200 Construction Barrier - Lease/Rental - Additional months	LF per Month			
C	QMB ABSORB 350 TL-3	EA	2		
D	QMB Barrier Transfer Machine (TTM) - Lease/Rental	EA	2		
E	QMB Barrier Transfer Machine (TTM) - Lease/Rental - Additional months	EA per Month			

TOTAL \_\_\_\_\_

No adjustment in compensation will be made in the contract lump sum prices paid for Quickchange Moveable Barrier System due to differences between the quantities shown in the cost break-down furnished by the Contractor and the quantities required to perform the work as shown on the plans and as specified in these special provisions.

Individual line item values in the approved cost break-down table will be used to determine partial payments during the progress of the work and as the basis for calculating an adjustment in compensation for the contract lump sum item of Quickchange Moveable Barrier System due to changes in line items of work ordered by the Engineer. When the total of ordered changes to line items of work increases or decreases the lump sum price bid for Quickchange Moveable Barrier System by more than 25 percent, the adjustment in compensation for the applicable lump sum item will be determined in the same manner specified for increases and decreases in the total pay quantity of an item of work in Section 4-1.03B, "Increased or Decreased Quantities," of the Standard Specifications.

## **PAYMENT**

The contract lump sum price paid for Quickchange Moveable Barrier System, shall include full compensation for furnishing all labor, materials (including marker panels, the transfer and transport machine, the ABSORB 350 Test Level 3 crash cushion, and reflectors), tools, equipment, and incidentals, and for doing all work involved in furnishing, training personnel, delivering, installing, daily repositioning and removing the Quickchange Moveable Barrier System, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Full compensation for daily repositioning, as shown on the plans, of the QMB shall be considered as included in the contract lump sum price for Quickchange Moveable Barrier System and no additional compensation will be allowed therefor.

## **10-1.44 REMOVE YELLOW TRAFFIC STRIPE AND PAVEMENT MARKING (HAZARDOUS WASTE)**

### **GENERAL**

#### **Summary**

This work includes removing existing yellow thermoplastic and yellow painted traffic stripe and pavement marking at the locations shown on the plans. The residue from the removal of this material is a hazardous waste.

Residue from removal of yellow thermoplastic and yellow painted traffic stripe and pavement marking contains lead chromate. The average lead concentration is greater than or equal to 1000 mg/kg total lead or 5 mg/l soluble lead. When applied to the roadway, the yellow thermoplastic and yellow painted traffic stripe and pavement marking contained as much as 2.6 percent lead. Residue produced from the removal of this yellow thermoplastic and yellow painted traffic stripe and pavement marking contains heavy metals in concentrations that exceed thresholds established by the Health and Safety Code and 22 CA Code of Regs. For bidding purposes, assume that the residue is not regulated under the Federal Resource Conservation and Recovery Act (RCRA), 42 USC § 6901 et seq.. Yellow thermoplastic and yellow paint may produce toxic fumes when heated.

#### **Submittals**

**Lead Compliance Plan:** Submit a lead compliance plan under Section 7-1.07, "Lead Compliance Plan," of the Standard Specifications.

**Work Plan:** Submit a work plan for the removal, containment, storage, and disposal of yellow thermoplastic and yellow painted traffic stripe and pavement marking for acceptance not less than 15 days prior to the start of the removal operations. The work plan must include:

1. Objective of the operation
2. Removal equipment
3. Type of hazardous waste storage containers
4. Container storage location and how it will be secured
5. Hazardous waste sampling protocol and QA/QC requirements and procedures
6. Qualifications of sampling personnel
7. Analytical lab that will perform the analyses
8. Certification documentation of the hazardous waste hauler that will transport the hazardous waste
9. Disposal site that will accept the hazardous waste residue

The Engineer will review the work plan within 5 business days of receipt.

Do not perform work that generates hazardous waste residue until the work plan has been accepted by the Engineer. The Engineer's review and acceptance does not waive any contract requirements and does not relieve the Contractor from complying with Federal, State, and local laws, regulations, and requirements.

Correct any rejected work plan and resubmit a corrected work plan within 5 business days of notification by the Engineer; at which time a new review period of 5 business days will begin.